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5. *The Continuous Spectrum.* This shows comparatively little variation in intensity. The absorption within the titanium oxide bands, however, seems to be less strong near minimum of the star's light than at an earlier phase.

ASYMMETRY IN THE SPECTRUM

A remarkable characteristic of the spectrum near minimum of light is the longitudinal asymmetry of the two components of the hydrogen lines and of the portions of the continuous spectrum adjoining the heads of the titanium oxide bands. The components of the hydrogen lines are displaced with reference to one another along the lengths of the lines giving a peculiar "staggered" appearance, while the ends of the bright regions next to the oxide bands seem to bend away from the normal position of the continuous spectrum.

Measurements on the two components of the hydrogen lines show a longitudinal displacement of about 0.020 mm with reference to one another. This would correspond to slightly more than 0″.2 in angular measure at the focus of the telescope and would indicate that the shells of gas producing the two components are displaced by this amount relatively to one another, the second and more diffuse component originating mainly on the following side of the star.

The bending of the continuous spectrum at the edges of the titanium oxide flutings is most prominent at λλ4580, 4740, and 4955. Its explanation will require further investigation.

The position of the helium line λ4472 seems to correspond to that of the second hydrogen component, while the narrow bright lines λλ4202, 4308 and 4571 are probably nearly or quite symmetrical with reference to the continuous spectrum.

W. S. Adams.
A. H. Joy.

The Parallax of N. G. C. 226[1]

Fourteen exposures of this object give:

$$\pi\text{rel.} = -0''.011 \pm 0''.003.$$

The nebulosity around the stellar part of this nebula, whose variability was discovered by Hubble, is not quite symmetrical, and extremely good seeing is necessary to secure reliable photographs.

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[1] *Astrophysical Journal*, **45**, 351, 1917.

As the weather conditions for many of the fourteen exposures were such as to vitiate the results, six of the plates which are extremely good in quality were on this account measured again, giving:

$$\pi\text{rel.} = -0''.007 \pm 0''.006.$$

The negative parallax derived in both cases indicates that the real parallax must be small, probably less than $+0''.005$. This result is quite remarkable in relation to the motion (in one case reaching 20 to 30 seconds of arc annually) found by Hubble for some parts of the nebula[1]. Assuming as high a velocity as 1000 km/sec., this motion would still require a parallax of about $0''.100$, which is quite inconsistent with our present results. It seems necessary, therefore, to assume that the motions are a question of illumination, in which case we have to deal with the velocity of light. As we do not, however, know the orientation of the nebula, we can only conclude that the parallax must be small.

A. van Maanen.

The Parallaxes of Two Long-Period Variables

Eighteen exposures each of T *Cassiopeiae* and R *Trianguli* give as their parallaxes:

T Cass. π rel. $= +0''.027 \pm 0''.003$
R Triang. π rel. $= +0''.005 \pm 0''.005$

For only one other star of this type, *o Ceti*, is a parallax available: Russell gives π rel. $+0''.136$; Kostinsky, $+0''.013$; Mitchell, $+0''.061$. Applying the systematic corrections given in *Mount Wilson Contribution* No. 189, the absolute parallaxes of the three objects are $+0''.027$, $+0''.005$, and $+0''.047$. Using these values, we obtain the absolute magnitudes, M, at maximum and minimum, given in the following table:

	m		M	
	Max.	Min.	Max.	Min.
T Cass.	6.7	12.5	+3.9	+9.7
R Triang.	6.5	12.0	0.0	+5.5
o Ceti	1.7	9.6	+0.1	+8.0

A. van Maanen.